US PTO Customer No.: 25280 Inventor(s): Dany F. Michiels
Case No.: 9292 Express Mail Label No.: EL 992173622 US

Claims

1. A composite article comprising a silicone rubber matrix reinforced with polyaramid textile wherein said polyaramid textile is bonded to said silicone rubber by means of a bonding composition comprising an acryloxy organosilane.

- 5 2. A composite article according to claim 1 in which said polyaramid is activated with an epoxy compound.
 - 3. A composite article according to claim 1 in which the polyaramid is a pphenylene polyaramid.
- 4. A composite article according to claim 1 in which said bonding composition further comprises an epoxy organosilane.
 - 5. A composite article according to claim 4 in which said bonding composition further comprises a vinyl organosilane.
 - 6. A composite article according to claim 1 in which said organosilane is a trimethoxy silane.
- 7. A composite article according to claim 1 in which said polyaramid textile comprises polyaramid single end or cabled cords.
 - 8. A composite article according to claim 1 in which said polyaramid textile is a weft insertion warp knit fabric having polyaramid weft and/or warp yarns.
- 9. A process for manufacturing an polyaramid reinforced silicone rubber article comprising the steps of:
 - a) Selecting a polyaramid textile,

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 Optionally activating the polyaramid textile with an epoxy compound, and/or optionally activating the polyaramid textile with a plasma,

- c) Dipping the polyaramid textile into an organosilane dip comprising acryloxy organosilane, and
- 5 d) Bonding the dipped polyaramid textile to silicone rubber.
 - 10. A process according to claim 9 wherein said organosilane dip further comprises an epoxy organosilane.
 - 11. A process according to claim 9 wherein said organosilane dip is an aqueous dip.
- 12. A process according to claim 9 in which epoxy activation is followed by plasma activation, which is, in turn, followed by the organosilane dipping step.
 - 13. A process according to claim 12 in which said plasma activation comprises an air plasma.
- 14. A process according to claim 13 in which said plasma activation comprises
 an air plasma further including water as an aerosol.
 - 15. A process according to claim 9 in which said organosilane dip further comprises an amino functional organosilane.